6FS5

Beam Hexode

7-PIN MINIATURE TYPE

GENERAL DATA

Electrical:

Heater Characteristics and Ratings *(Design-Maximum Values)*:

Voltage (AC or DC)	6.3 ± 0.6	volts
Current at heater volts = 6.3	0.200	amp
Peak heater-cathode voltage:		
Heater negative with respect to cathode	200 max.	volts
Heater positive with respect to cathode	200[a] max.	volts

Direct Interelectrode Capacitances (Approx.):

	Without External Shield	*With External Shield*[b]	
Grid No.1 to plate	0.03	0.016	μμf
Grid No.1 to cathode & grid No.4 & grid No.2, grid No.3, and heater	4.8	4.8	μμf
Plate to cathode & grid No.4 & grid No.2, grid No.3, and heater	2	2.8	μμf

Characteristics, Class A₁ Amplifier:

Plate Voltage	275	volts
Grid-No.3 Voltage	135	volts
Grid-No.1 Voltage	-0.2	volt
Plate Resistance (Approx.)	0.24	megohm
Transconductance	10000	μmhos
Plate Current	9	ma
Grid-No.3 Current	0.17	ma
Grid-No.1 Voltage (Approx.) for transconductance (μmhos) = 100	-5	volts

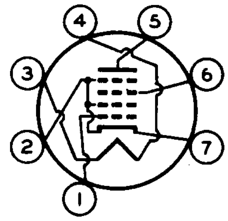
Mechanical:

Operating Position	Any
Type of Cathode	Coated Unipotential
Maximum Overall Length	2-1/8"
Maximum Seated Length	1-7/8"
Length, Base Seat to Bulb Top (Excluding tip)	1-1/2" ± 3/32"
Diameter	0.650" to 0.750"
Dimensional Outline	See *General Section*
Bulb	T5-1/2
Base	Small-Button Miniature 7-Pin (JEDEC No.E7-1)

6FS5

Basing Designation for BOTTOM VIEW. 7GA

Pin 1 - Grid No.1
Pin 2 - Cathode, Grid No.2, Grid No.4
Pin 3 - Heater
Pin 4 - Heater



Pin 5 - Plate
Pin 6 - Grid No.3
Pin 7 - Cathode, Grid No.2, Grid No.4

AMPLIFIER — Class A_1

Maximum Ratings, *Design-Maximum Values:*

PLATE VOLTAGE	300	max.	volts
GRID-No.3 (SCREEN-GRID) VOLTAGE	150	max.	volts
GRID-No.1 (CONTROL-GRID) VOLTAGE:			
Negative-bias value	50	max.	volts
Positive-bias value	0	max.	volts
CATHODE CURRENT	20	max.	ma
GRID-No.3 INPUT	0.15	max.	watt
PLATE DISSIPATION	3.25	max.	watts

Maximum Circuit Values:

Grid-No.1-Circuit Resistance:			
For fixed-bias operation	0.5	max.	megohm

[a] The dc component must not exceed 100 volts.
[b] With external shield JEDEC No.316 connected to pin 7.

OPERATING CONSIDERATIONS

This type has four grids—grid No.1 (Control grid), grid No.2 (Focusing grid), grid No.3 (Screen grid), and grid No.4 (Suppressor grid). Grid No.2 is (1) internally connected to cathode and grid No.4, (2) aligned with grid No.3, and (3) located between grids No.1 and No.3. The addition of grid No.2 results in an increase in the plate-current-to-screen-current ratio with subsequent noise reduction.